

REMARKS/ARGUMENTS

After the foregoing Amendment, Claims 1, 2, 4-8, 10-13 and 15-16 are currently pending in this application. Claims 3, 9, and 14 were canceled in the reply to the first Office Action without prejudice. Claims 1, 7 and 12 have been amended to more distinctly claim subject matter which the Applicants regard as the invention. Applicants submit that no new matter has been introduced into the application by these amendments.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett in view of Stewart.

The present invention transmits over a first antenna a first communication burst with a first data field followed by a midamble followed by a second data field followed by a first guard period and a second antenna transmits a second communication burst with a negative complex conjugate of the second data field followed by a midamble followed by a complex conjugate off the first data field followed by a second guard period. Neither Whinnett nor Stewart alone or in combination teach or suggest such an arrangement.

Furthermore, the method of transmission of the present invention allows for

the decoding to be performed after the first and second burst midambles are canceled. This cancellation results in an exact received signal model, not an approximation, reduces the complexity of the required calculations and improves performance of the data transmission. Neither Whinnett nor Stewart alone or in combination teach or suggest the cancellation of the first and second burst midambles.

Whinnett discloses a system for transmitting a signal and its complex conjugate from an antenna array. As the first and second Office Actions noted, Whinnett fails to disclose that the signal transmitted is composed of a first and second data field separated by a midamble, and in particular the arrangement of the present claims. Stewart only shows the structure of a midamble. The operation of the midamble and guard periods within the transmission is critical to the present invention. They act to limit the interference between the two data fields. The present invention also eliminates the need for the receiver to compensate for the unequal data field portion encoding by using the first symbol twice or implementing some other method of compensation providing a less complex system when transmitting a data field with an odd number of symbols. Neither reference discloses the switching the order of the data field over one antenna and, in particular, the manner as described in the claims. Consequently the present invention is patentable over Whinnett in view of Stewart.

Applicants: Kim et al.
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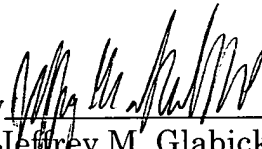
Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1, 2, 4-8, 10-13 and 15-16, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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